Madison Janakis

PhD Candidate
Department of Biological Sciences
University of South Carolina, Columbia SC, 29208
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EDUCATION

PhD Biological Sciences, University of South Carolina **Expected 2026**
BS Environmental Science, Biology (DM), DePaul University **2020**
Cumulative GPA: 3.69/4.00, Academic Honors: DePaul's Scholar Award recipient

RESEARCH

University of South Carolina in Columbia, SC, Department of Biological Sciences **2020-Pres**
PhD Candidate
Advisor: Dr. Daniel Speiser
Project: Visual ecology of tidal creek crustaceans

DePaul University in Chicago, IL, Department of Biological Sciences **2019-20**
Undergraduate researcher
Advisor: Dr. Jason Bystriansky
Senior thesis: "The combined effects of ocean acidification and temperature on filtration rates of the eastern oyster, *Crassostrea virginica*."

The Field Museum in Chicago, IL, Pritzer DNA Lab, Lichenography **Sum 2019**
Undergraduate research affiliate
Advisor: Dr. Thorsten Lumbsch, Mentor: Dr. Joel Mercado-Diaz
Worked independently to sequence photobiont genes from Caribbean lichen samples.

AWARDS

Vernberg Graduate Fellowship Award **2025**
Support for completing dissertation research at Baruch Marine Field Lab ($1,000)

The Crustacean Society Graduate Student Travel Award **2025**
Support to attend TCS annual meeting in Paris, France ($500)

Support to Promote Advancement of Research and Creativity (SPARC), USC **2022**
"Visual Ecology in the Porcelain crab, *Petrolisthes armatus*" ($5,000)

Slocum Lunz Foundation **2022**
"The role of polarized light in visual signaling in the blue crab, *Callinectes sapidus"* ($1,170)

Elsie Taber Funds (2X)
Support to attend Evolution and Development of Marine Invertebrates summer course at Friday Harbor Labs, WA for summer course ($4,000) **2022**
Support to attend Sensory Biology course in Lund, Sweden ($3,500) **2024**

Graduate school travel grant, USC **2024**
Support to attend the annual Evolution conference in Montreal, Canada ($700)

SICB Charlotte Mangum Student Support **2023-25**
Student housing support at the annual SICB conference

RELEVANT COURSEWORK

Sensory Biology (2 weeks) - University of Lund, Lund, Sweden **2024**
Evolution and Development of Marine Invertebrates – Univ. of Washington, Friday Harbor WA **2022**
Marine Data Science with R (MSCI 758) – University of South Carolina, Columbia, SC **2022**
Neurophysiology (BIOL 635) - University of South Carolina, Columbia, SC **2022**
Speciation (BIOL 654) - University of South Carolina, Columbia, SC **2021**
Experimental Design and Analysis (BIOL 599) - University of South Carolina, Columbia, SC **2021**
Advanced Oceanography (BIOL 750) - University of South Carolina, Columbia, SC **2021**
Topics in Life History (BIOL 703) - University of South Carolina, Columbia, SC **2020**

CONFERENCE PRESENTATIONS:

Madison Janakis (Jan 3-7) Talk: "Mud crabs may use low contrast AoLP cues to detect objects in visually noisy tidal creeks" [Society of Integrative and Comparative Biology Annual meeting, Portland, OR] **2026**

Madison Janakis (July 7-10) Talk: "The visual ecology of two tidal creek crabs, *Petrolisthes armatus* and *Panopeus herbstii"* [The Crustacean Society summer meeting, Paris, France] **2025**

- Awarded best student talk

Madison Janakis (Jan 3-7) Talk: "Visual ecology of two tidal creek crab, *Panopeus herbstii* and *Petrolisthes armatus*" [SICB annual meeting, Atlanta, GA]

Madison Janakis (July 26-30) Symposia Talk: "Visual Ecology of tidal creeks: how two types of crab approach a challenging light environment" [3rd Joint Congress on Evolutionary Biology, Montreal, Canada] **2024**

Madison Janakis (Jan 2-6) Talk: "Comparative visual ecology of two sympatric crabs from tidal creeks" [SICB Annual meeting, Seattle, WA]. **2024**

- **Awarded best presentation by The Crustacean Society**

Madison Janakis (Jan 3-7) Poster: "Comparative visual ecology of two sympatric crabs from tidal creeks" [SICB Annual meeting, Austin, TX]. **2023**

Madison Janakis (Jan 3-7) Virtual Poster: "Visual Ecology of the Green Porcelain Crab, *Petrolisthes armatus"* [SICB Annual meeting, virtual]. **2022**

SERVICE and OUTREACH:

(in)Visibility: Exploring the Dimensions of Perception **2025**

Research Presenter

- Humanities and science collaboration
- Awarded top student presentation

South Carolina Association of Naturalists (SCAN) **2025**

Research presenter at annual meeting

The Crustacean Society **2025**

Poster Judge at SICB, Atlanta

Skype a Scientist, **2023-Pres**

Science communicator

- Video called with groups to share ongoing research and answer science questions.
  - Three separate fifth grade student groups (FL, CA, KY) totally ~120 students
  - A public library session -- mixed age (4yr-, ~20 people) (Cloquet, MN)
  - 1st year class from UK

Graduate Association of Biological Sciences, USC **2020-Pres**

- Served as Social Chair 2021-22
- Served as Secretary 2022-23

Future STEM Heroes Day **2023-Pres**

- Helped to organize and host a STEM event for over local K-6th graders.

Science Fair Judge **Spring 2023**

- Junior Science and Humanities Symposia for high schoolers from across SC.

"Research at USC" Graduate Student Panel **Fall 2023**

- Spoke to undergraduates about how to get involved in ongoing research at USC **Spring 2025**

UNDERGRADUATE MENTEES

Lauren Tallmadge* (Neuro '25)	Fear and personality in mud crabs	**2024 - Pres**
Maryia Sikirzhytskaya* (Biology '25)	Cardio response of crustaceans' to looming stimuli	**2024 - 2025**
Brandon Jolley (Biology '24)	Spatial vision in apple snails	**2023 - 2024**
Sarah McNesby (Biology '25)	Colored polarized optomotor, crustacean personality	**2023 - 2024**
Keyonne McKnight (Biology '24)	Snapping shrimp and mud crab symbiosis	**2023 - 2024**
Auden Grant* (Biology '24)	Polarized optomotor, mud crab maze learning	**2022 - 2024**
Isabelle Paris (Biology '23)	Colored polarized optomotor	**2023**
Rebecca LeBlanc* (Biology '23)	Electroretinography of porcelain crabs	**2022 - 2023**
Selina Guirges (Biology '23)	Achromatic and polarized optomotor	**2022 - 2023**

**Magellan award recipient*

TEACHING EXPERIENCE:

Lab Instructor, University of South Carolina, BIOL 301: *Evolution and Ecology* **2022 –2025**
In person (12 sections total, 2 per semester)

Lab Instructor, University of South Carolina, BIOL 101: *Biological Principles I* **Fall 2021**
In person (2 sections)

Lab Instructor, University of South Carolina, BIOL 102: *Biological Principles II* **Spring 2021**
Virtual (2 sections)

Lab Instructor, University of South Carolina, BIOL 101: *Biological Principles I* **Fall 2020**
Virtual (2 sections)

PUBLICATIONS:

Janakis, M., S. Guirges, A. Grant, I. Paris, E.F. LoPresti, D.I. Speiser. "Two decapod crustaceans, *Panopeus herbstii* and *Petrolisthes armatus*, stabilize their gaze using achromatic visual cues, but not the angle of linearly polarized light." (2025). *Integrative Organismal Biology.* DOI: 10.1093/iob/obaf034

Janakis, M., Leblanc, R., Chappell, D.R., Spesier, D.I. "Visual ecology of two tidal creek crustaceans: irradiance sensitivity, temporal resolution and spectral responses of *Panopeus herbstii* and *Petrolisthes armatus*." In review at *Journal of Experimental Biology*.

Janakis, M., Sikirzhytskaya, M., Speiser, D.I., "The cardiac response of the Atlantic mud crab, *Panopeus herbstii* and the porcelain crab, *Petrolisthes armatus* to overhead stimuli reveal visual systems that are sensitivity to low contrast objects and the angle of linearly polarized light." In prep.

Azeemullah, A., Cimino, A., Comp, D.E., Hunt, S., **Janakis, M.**, Khan, S.S., Labedz, P., Lee, C., and Kharas, G.B. (2022). "Synthesis and styrene copolymerization of novel trisubstituted ethylenes: 14. Fluoro ring-substituted isobutyl 2-cyano-3-phenyl-2-propenoates." Preprint, ChemRxiv. Cambridge Open Engage 2022.